

**\*\* GENERAL NOTES \*\***

1. THE BASIS OF COORDINATES FOR THIS SURVEY WAS U.S. COASTAL AND GEODETIC SURVEY TRIANGULATION STATION "WELL-RESET", STATION DESIGNATION AM0410, AS PUBLISHED BY THE U.S. GEODETIC SURVEY, STATE OF TEXAS, COUNTY OF BRAZORIA, AS DEPICTED ON U.S.G.S. QUADRANGLE MAP "FREEPORT"(1974). STATION COORDINATES OF 425,703.62458 NORTH, 3,187,486.93685 EAST (TEXAS STATE PLANE COORDINATES, NAD 27, ZONE 4204 IN U.S. FEET) WERE DERIVED FROM ORIGINAL GEOGRAPHIC COORDINATES OF 28°57'09.17212 NORTH, 95°17'10.82029°W (NAD 83).
2. THE BASIS OF ELEVATIONS FOR THIS SURVEY WAS U.S. COASTAL AND GEODETIC SURVEY GRADE GPS (GLOBAL POSITIONING SYSTEM) RECEIVERS.
3. THE BASIS OF ELEVATIONS FOR THIS SURVEY WAS U.S. COASTAL AND GEODETIC SURVEY TRIANGULATION STATION "WELL-RESET" HAVING AN (ADJUSTED) ELEVATION OF 5.70 FEET, NGVD 29.
4. BASELINE CONTROL ESTABLISHED FOR THIS SURVEY CONSIST OF EITHER 5/8" X 36" IRON RODS OR 3" "P&K" NAILS WITH METAL SHINER AS LISTED.
5. THIS SURVEY WAS ACCOMPLISHED USING GPS AND CONVENTIONAL (TERRESTRIAL) METHODS.

**\*\* PROJECT SURVEY CONTROL \*\***

PT.#	NORTH COORD.	EAST COORD.	ELEVATION	DESCRIPTION
1	425703.625	3187486.937	5.70	BASE TRIG STA.
1000	424159.523	3187329.959	6.32	PK O-LINE
1001	424020.669	3187219.046	6.78	PK N-LINE
1002	423868.044	3187112.120	6.90	PK M-LINE
1003	423593.737	3186898.333	6.10	PK L-LINE
1004	423295.745	3186639.620	6.79	PK K-LINE
1005	422996.373	3186381.091	6.55	PK LINE-J
1006	422735.256	3186155.638	5.93	PK LINE-I
1007	422431.042	3185933.634	6.18	PK LINE H
1008	422127.947	3185712.431	6.21	PK G-LINE
1009	421830.308	3185521.000	6.32	PK F-LINE
1010	421510.857	3185315.382	6.39	PK E-LINE
1011	421227.057	3185071.123	4.27	PK D-LINE
1012	420921.481	3184845.791	5.25	PK / C-2
1013	420830.236	3184962.649	4.50	IR C-1
1014	420556.442	3184807.644	4.03	IR B-LINE
1015	420283.242	3184652.906	4.09	IR-A LINE

**\*\* CROSS SECTIONS LINE BEARINGS \*\***

LINE	AVG. BEARING	LINE	AVG. BEARING
A	S 51°37'E	G	S 52°17'E
B	S 81°03'E	H	S 50°34'E
C-1	S 49°02'E	I	S 48°41'E
C-2(NW)	S 46°49'E	J	S 49°24'E
C-2(SE)	S 35°58'E	K	S 48°15'E
D	S 47°51'E	L	S 47°35'E
E	S 50°10'E	M	S 48°23'E
F	S 58°49'E	N	S 50°09'E
		O	S 49°24'E

**\*\* SHORELINE BOUNDARY DEFINITION NODES \*\***  
ELEVATION = 0.80'

PT.#	NORTH COORD.	EAST COORD.
1016	424036.553	3187520.091
1017	423937.986	3187417.361
1018	423823.559	3187315.330
1019	423714.295	3187209.996
1020	423619.091	3187133.472
1021	423518.018	3187037.586
1026	423212.483	3186762.294
1025	423100.422	3186661.067
1030	422835.789	3186454.049
1031	422689.178	3186341.606
1032	422568.567	3186253.584
1033	422457.906	3186160.559
1034	422344.884	3186067.885
1035	422214.350	3185941.318
1036	422121.365	3185876.117
1037	421994.555	3185651.414
1038	421446.696	3185418.063

**\*\* LEGEND \*\***

- INDICATES 5/8" DIA. IRON ROD CONTROL MONUMENT ESTABLISHED THIS SURVEY
  - INDICATES "P&K" NAIL WITH "SHINER" CONTROL MONUMENT SET IN PAVEMENT ESTABLISHED THIS SURVEY
  - INDICATES SURVEYED POINT WITH ELEVATION
- OTHER LINES AND SYMBOLS ARE AS INDICATED

**\* SPECIAL NOTE \***

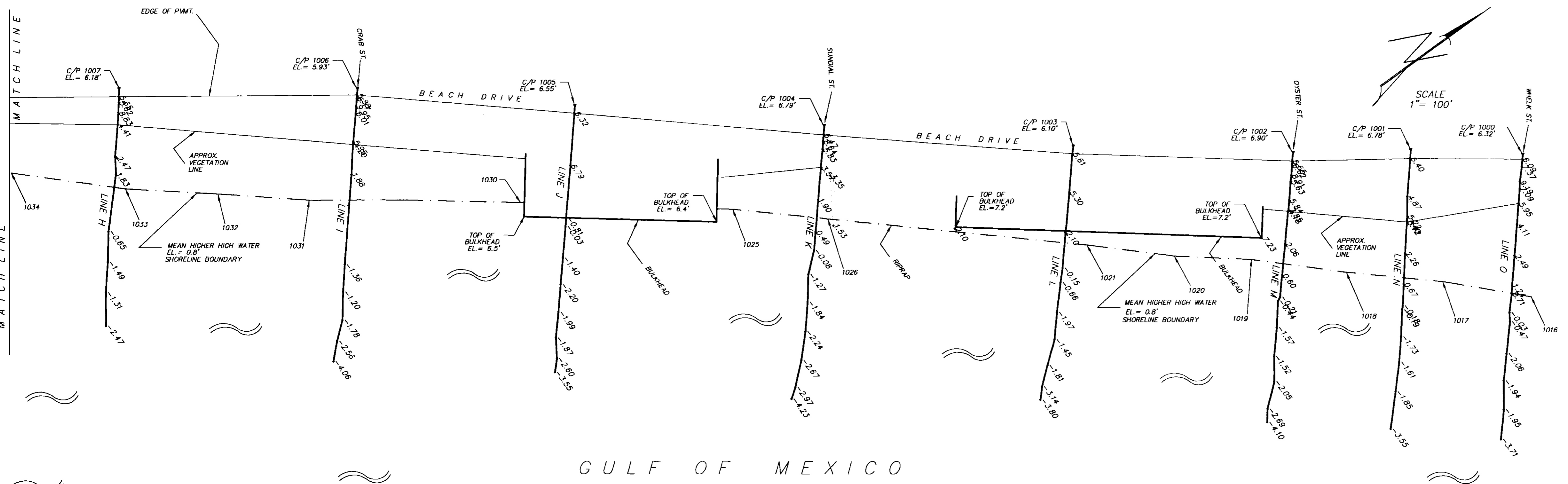
THIS SURVEY WAS PERFORMED IN ACCORDANCE WITH SECTION 33.136, NATURAL RESOURCES CODE, FOR THE PURPOSE OF EVIDENCING THE LOCATION OF THE SHORELINE IN THE AREA DEPICTED IN THIS SURVEY AS THAT SHORELINE EXISTED BEFORE COMMENCEMENT OF EROSION RESPONSE ACTIVITY, AS REQUIRED BY CHAPTER 33, NATURAL RESOURCES CODE. THE LINE DEPICTED ON THIS SURVEY FIXES THE SECTION 15.23 COASTAL BOUNDARY SURVEY.

**\* SURVEYOR'S CERTIFICATE \***

I, MICHAEL HAAS, LICENSED STATE LAND SURVEYOR, HEREBY CERTIFY THAT THIS DRAWING ACCURATELY DEPICTS THE RESULTS OF A SURVEY MADE BY ME ON THE GROUND, AND THAT I HAVE LOCATED THE NATURAL CONTOUR LINE OF MEAN HIGHER HIGH TIDE AND THAT TO THE BEST OF MY KNOWLEDGE NO ARTIFICIAL FILL IS LOCATED BEYOND THE BOUNDARY LINE SHOWN.

Michael Haas  
Licensed State Land Surveyor

DATE: 11-28-2000



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A  
C  
F  
10-18-2001 D.J.H.

<b>HAAS SURVEYING</b> 3370 AVENUE "A" INGLESIDE, TEXAS 78362 (361)776-7007 / (361)774-7870 FAX (361)776-6946	DRAWN BY: R.S.M. DATE: 12/6/00 DWG. NO.: 715PLANDWG SURVEY DATE: 11/28-29/00	APPROVED BY: M.H. PROJ. NO. MM715 REVISIONS: 12/8/00 12/13/00 SCALE: 1" = 100'	CLIENT: COASTAL TECHNOLOGY CORPORATION 3625 20TH STREET VERO BEACH, FLORIDA 32960	PROJECT: SURFSIDE, TEXAS BEACH NOURISHMENT PROJECT	SHEET NO.: 1 OF 5
	BRAZORIA COUNTY TNRC 33.136 SKETCH 1				